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Chapter 5

Future Challenges and The Way Forward

5.1 Future Challenges

5.2 The Way Forward

This final chapter explains about future challenges and the way forward in implementing the planning concept in the study area. The previous chapters already demonstrated the current condition, concepts, proposed strategy and program, and the spatial planning. However, we need to consider several factors in order to support project implementation in achieving maximize results and outcomes, as well as to ensure its sustainability.

5.1 FUTURE CHALLENGES

There will always be challenges in planning and development, especially in achieving established goal and objectives. The occurring problems in West Semarang such as slums, institutional setting, river capacity, land-use change, and groundwater extraction may result in three ultimate impacts, namely flood events and vulnerable livelihood in coastal area and land subsidence. For this reason, the proposed planning concept aims to develop the ecologically sustainable West Semarang coastal area.

However, considering the current state of driving forces and existing problems, there are several challenges lie ahead of us, such as:

1. *Livelihood sustainability*

Challenge may come from the community within the micro-planning area as they are prone to flooding and slum problems. Those who live in the micro-planning area are mostly bound to their livelihood and have no better option of a place to live. Getting adequate income to meet their basic needs is their main priority, thus causing their lack of concern for other matters which are not directly related to the fulfillment of their personal living needs. Better sanitation in their living environment and the preservation of natural resources are neglected. The community seems to be living their lives that way because they are not introduced and encouraged to move forward, and to look for possibilities for creating better livelihood and living environment. We cannot afford such a condition to continue.

It must be addressed immediately although changing the community culture and social behavior is not an easy task. The challenge is how to open people's minds, as well as to enrich their skills, knowledge, and understanding in developing and improving their livelihood while at the same time preserving the natural environment. Thus, ways to build people's new perception of their potencies, ways to carefully change their mindsets and encourage them to step out of their current social and cultural conditions, and ways to introduce and instill better actions and behaviors in their routine activities as a form of involvement in inclusive development of the micro-planning area should be designed carefully and managed effectively.

The community needs guidance on to how to live a healthy life and how to preserve the environment. Also, efforts to specifically improve their competitiveness and capacity while enhancing the regional economy in general need to be introduced. Encouraging people to be creative, innovative and independent seems to be a complex challenge that must be immediately followed up, given the success of these efforts is needed in balancing the community's ability with rapid changes in the natural environment and socio-economic conditions.

2. Build community trust and participation in government officials and institutions

Bureaucratic reform in Indonesia is still ongoing and has not shown satisfactory results. Indonesian institutions, including those in the planning area, still lack the government administration needed to optimize community services. The challenges in this circumstance are how to make and apply firm and effective rules properly, how to manage officers to be professional and ethical, and how to encourage the community to participate actively and be involved in supporting institution improvement and community development. There have been many cases of government officers manipulating their authority to make a decision and regulation which profitable for some actors, especially those who hold power. Moreover, it is also known that most Indonesian people lack legal awareness and are afraid of dealing or having problems with laws, rules, and institutions. Thus, building community trust and participation in government officials and institutions is as challenging as reforming the institutional bureaucracy.

The planning concept sees governance setting as one of the important keys to succeed in implementing the ICZM-Eco DRR concept, therefore ensuring the government to encourage collaboration among development actors is needed. Stakeholders' readiness and capacity in financing, applying and learning the dynamic innovation for better sustainable development is one of the future challenges that we need to overcome.

3. Promote environment-based development

Development projects in Indonesia are rarely environmentally friendly, even when the projects aim to reduce or prevent disaster risks. The environmental aspect is rarely seen as important as the economic aspect. Thus, the future challenge is to encourage all development actors to always consider the environmental aspect of each project for which they are responsible, even if it is not directly related to the environment. One example is industrial estates that must establish an appropriate waste management to ensure that waste disposal does not harm the environment. The government may start with concerning not only the structural but also the ecosystem and non-structural measures of Beringin River Normalization Project. It must consider the sustainability of the Beringin River good condition, what should be done, which environmental aspect must be fulfilled and who must be involved in the river quality maintenance.

Environmentally friendly development must start implementing green infrastructure-oriented technology and mindset. In this case, not only the orientation of infrastructure development but also the mentality of the developer and the community need to be directed to have synergies for achieving environment-based development. In addition, infrastructure development is expected to have a long-term benefit period, answer community needs, and be on target and effective. Meanwhile, the now and then condition shows although the infrastructure projects usually respond to current needs, it somehow has long-term adverse effects on the environment.

4. Optimize geographical conditions both for human welfare and environmental sustainability

West Semarang is more developed than other parts of Semarang City because of its geographical condition and strategic location. Its rapid development has led to massive land-use change not only in coastal areas but also in the upstream of Beringin River, reducing mangrove forest and green space of West Semarang, particularly to meet the space requirements for a growing population and economic activities. The existing development of West Semarang is not based on a single specific development planning document or even the carrying capacity of the West Semarang environment. Moreover, currently there is no single planning document which is carried out comprehensively. The challenge of this situation is how to encourage the government and all development actors to start planning development based on the carrying capacity of the West Semarang environment, especially in determining which locations

can be built, which areas should be conserved, and the resources available for use or prohibited from exploitation; and how to plan, implement and monitor and evaluate the implementation of development plans effectively. Also, the proposed ICZM and Eco-DRR concepts might help in dealing with this situation.

Geographical condition will change along with the utilization of natural resources it provides and the effects of climate change it suffers. As long as the development actors only focus on the economic aspects, exploitation of natural resources in the region will continue and in the long run will have negative impacts on the environmental balance and human wellbeing. The challenge is how to optimize geographical conditions both for human welfare and environmental sustainability. Establishing strong commitment and consensus between all development actors in planning, applying, monitoring, and evaluating activities needed in facing the challenge itself is a tough beginning.

5. Increasing population growth and land demand

The population in the planning area is increasing for several causes, and one of them is urbanization. People from other regions come to West Semarang because more work opportunities are provided by mainly industrial estates. Without ignoring the needs of the indigenous population of West Semarang, there will be more space needed to accommodate the needs of the growing population. Therefore, development in West Semarang must consider the carrying capacity of the West Semarang environment. The challenge is whether the government and other development actors measure the carrying capacity of the West Semarang environment before promoting the rapid development of West Semarang. Besides, the management of West Semarang's rapid development will become more complicated when conflicts arise between the government, the private sectors, and the community, especially in matters of land occupation and land use.

Population growth means additional space is needed, not only for shelter and activities, but also for food and water provision. If development actors are still applying current style of development which is not environmentally sound, the inevitable impacts of land-use change and climate change can become even worse and will certainly affect the whole community, in form of failure in maintaining or achieving food and water security. Land conservation and agriculture that is opened, utilized, and converted to industrial, business and housing needs, causes ecosystem and hydrological disruption which exacerbate the impacts of climate change, especially on planning area, in the form of greater flood, drought, and crop failure potencies. In the end, if the circumstance is not handled properly, there will be greater difficulties and challenges in maintaining food and water security (not to mention the possibility of food and water crisis) and unavoidable dependency on other regions for food and water provision. The predicted future is a high price need to be paid by all the development actors for placing importance on the economic rather than the ecological function of the land.

6. Infrastructure readiness

The provision of the necessary infrastructure is a must in every regional development. Unfortunately, West Semarang, with its appeal as a developed region, still lacks water infrastructure both for the provision of clean water and the prevention from flood disaster risks to meet the needs of the growing population and its increasing activities. The challenge for this situation is how to meet appropriately the needs of water infrastructure to support all activities of the population without neglecting the environment carrying capacity. In this case, this is not only about infrastructure readiness but also the readiness and consciousness of all actors to build and manage infrastructure in an environmentally safe way, for example, ways to resolve water scarcity without causing groundwater exploitation and risking future land subsidence.

Moreover, in the long run, the basic needs that must be met are not only shelter, employment, and water and food security, but also health. Public health is greatly influenced by the quality of soil, water and air. If the environmental aspect is not prioritized in development, the more likely the development will generate waste and pollution that cannot be immediately overcome due to the unavailability of adequate waste treatment facilities and infrastructure. The waste and pollution that are not handled properly will cause water, soil and air quality deterioration, which in the end will ultimately affect the quality of the environment and public health.

The development of residential, industrial or commercial areas must also consider the waste and pollution it generates. Unfortunately, current infrastructure development only focuses on utilizing natural resources to meet basic needs and does not pay enough attention to the capacity provided for waste disposal and pollution countermeasures. The closest challenge to the future is how to immediately plan and prepare waste treatment and pollution countermeasure facilities and infrastructure to meet the balance between the use of natural resources and the capacity of the environment to accommodate the waste generated from such utilization so that sustainable and good quality of public health and environment can be well maintained.



5.2 THE WAY FORWARD

This planning studio aims to promote the implementation of ICZM-Eco DRR in the West of Semarang. For that reason, the need for mainstreaming and upscaling the Eco-DRR concept in development planning must be emphasized. It becomes a challenge given the concept involves multidisciplinary and multi-sectoral institutions. In contrast, most existing legal and institutional frameworks do not necessarily support nor encourage such integrated approaches, proven by the occurrence of overlapping regulations, unclear institutional mandates, and legal frameworks that are not enforceable. However, it is still believed that with strong multi-coordination and a similar understanding of this concept, it makes this concept implementable in the future.

There are two most important aspects regarding future actions which should be considered to implement this concept, in terms of governance and disaster risk.

a. Governance

To further implement the concept, the government must partner and share the responsibility with all actors, including the private sector and the community in achieving environmentally sound sustainable development goals and targets. For that, the government must encourage development actors to always keep abreast of developments innovation, especially innovation in information system and technology, in order to establish effective and efficient action, interaction and coordination of all actors. Besides, it is important to note that considering the need of good coordination between government, private sector, and society in the development, which can be done by the delivery of planning in every phase of development.

Further development projects must calculate not only the costs and benefits of infrastructure, but also the costs and benefits of community capacity building and sustainable environmental conservation that need to be prepared following the construction of the infrastructure. Furthermore, implementing the ICZM-Eco DRR concept requires significant funding, that is why exploring the potentials funding to implement the programs and actions through initiating some alternative financing and budgeting will be very necessary. In short, transparency of information, especially in the management of the planning area is needed. Planner and government need information and knowledge which local people possess, and this knowledge needs to be gathered before starting the planning or during the planning process.

b. Disaster Risk

The excessive exploitation of natural resources (water and land) in study area will have negative impacts on the environmental balance and human welfare. Therefore, mainstreaming the ICZM-Eco DRR concept into urban governance and planning should be done seriously. Furthermore, it also needs to tackle the disaster risk and uncertainties in the study area, as well as to enhance the adaptive capacities to ensure the resilience community in study area. Above all, encouraging the community to take an active role in the development planning process, such as the inclusion of women and other minorities in Eco-DRR is vital, because reducing marginalization and improving equality and equity will increase the resilience of communities as a whole.

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